

REMARKS

Claims 1, 3 and 5-9 are rejected; claim 18 is withdrawn from consideration as being directed to a non-elected invention; and claim 7 is objected to as being broader than claim 1 from which it depends.

In response to the objection, claim 7 has been amended to delete “for plasma process,” and to instead recite that the seal material of claim is used for plasma process. Withdrawal of the objection is respectfully requested.

Claims 1, 3 and 6-9 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,642,300 to Kawaguchi et al, JP 2002-161264 to Masaki et al (JP ‘264), EP 0 432 911 A1 to Goebel (EP ‘911) or JP 5-279535 to Michio et al (JP ‘535) in combination or alone in view of U.S. Patent No. 6,870,662 to Tseng et al.

Each of Kawaguchi et al, JP ‘264, EP ‘911 and JP ‘535 was cited as disclosing vulcanizable fluoropolymer compositions suitable for making seals, gaskets, etc., and designed for plasma-resistance and/or heat aging-resistance. The Examiner cited Tseng et al as disclosing addition of a pigment within the scope of present claim 1 to various polymer compositions so as to improve plasma resistance “due to the generation of positively charged polymer and negatively charged pigment particles.”

Applicants traverse, and respectfully request the Examiner to reconsider for the following reasons.

The present invention is directed to a fluorine containing elastomer composition for a seal material of a semiconductor production device comprising a fluorine-containing elastomer and a specific compound having plasma antiaging effects.

Turning to the cited prior art, Tseng et al relates to a method of surface modification of an electrophoretic display cell surface, which may include plasma treatment of the subject surface (column 2, lines 19-21). More particularly, Tseng et al relates to an electrophoretic display cell or microcup (made from a thermoplastic or thermoset precursor as described bridging columns 3-4) that is filled with charge pigment particles dispersed in a dielectric solvent (column 4, lines 30-31).

This is not a disclosure of an elastomer composition containing a charged pigment particle. Rather, as noted above, the microcup is filled with charged pigment particles that are dispersed in a dielectric solvent. Furthermore, Tseng et al at column 2, lines 32-41 does not disclose improved plasma resistance by incorporating a pigment particle into an elastomer composition. Rather, the cited passage of Tseng et al describes that by treating the microcup surface with plasma, the resulting display cell exhibits certain advantageous characteristics. Further, as for the material constituting the microcup, the disclosure bridging columns 3-4 does not mention a fluorine-containing elastomer composition.

That is, Tseng et al relates to the field of “microcup” entirely different from that of the present invention, and there is no disclosure of “a compound having plasma antiaging effects.”

Applicants further comment as follows.

Tseng et al bridging cols. 4-5 discloses that the suspending medium may be colored by dyes such as an anthraquinone dye. However, this disclosure has nothing to do with the thermoplastic or thermoset precursor used for preparation of the microcups (col. 3, line 65 - col. 4, line 1). Of course, Tseng et al does not associate the dyes disclosed bridging cols. 4-5 with a plasma antiaging effect. In fact, Tseng et al is entirely silent as to plasma antiaging effect. Generally speaking, many of the dyes disclosed by Tseng et al cannot be used for a seal material

because of their poor stability, whereas the specific pigments as defined in claim 1 are specifically selected for use in seal materials. Therefore, even if one skilled in the art were to attempt to combine Tseng et al with any of the four primary references, there is no apparent reason which would lead one of ordinary skill to select specific pigments having a plasma antiaging effect from the dyes and pigments disclosed by Tseng et al (which, as noted above, are used to color the suspending medium and not the material of the microcup) and to combine them with a fluorine-containing elastomer disclosed in the primary references.

For the above reasons, it is respectfully submitted that the present claims are patentable over the cited prior art, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi et al, JP '264, EP '911 or JP '535 in combination or alone in view of Tseng et al and further in view of U.S. Patent No. 7,323,515 to Hayashida et al. Hayashida et al was cited as disclosing a seal product containing no or a reduced metallic atom content.

Applicants rely on the response above with respect to the rejection of claims 1, 3 and 6-9. Withdrawal of the foregoing rejection is respectfully requested.

Withdrawal of all rejections and allowance of claims 1, 3 and 5-9 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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